



June 3, 2022

Ms. Tracy Sharkey, Chair
Planning Board & Conservation Commission
c/o Mr. Matthew Benoit
Director of Community Development
Municipal Building
29 Depot Street
Douglas, Massachusetts 01516

Mr. Michael F. Gagan, Chair
Planning Board
c/o Ms. Jen Hager
Planning and Economic Development Director
Municipal Building
4 Uxbridge Road
Sutton, Massachusetts 01590

Re: Form C Application for a Definitive Plan-Residential Subdivision
Response to Sutton Douglas Development Definitive Subdivision Peer Review
0 Mumford Street & 5 Forest Street, Douglas, MA 01516
61 Duval Road, Sutton, MA 01590

Dear Ms. Sharkey, Mr. Gagan, and Members of the respective Boards and Commission:

On Behalf of the Applicant, Flynn Build & Develop, we are submitting herewith a Response to Peer Review Comments raised by Graves Engineering, Inc (GEI) in their letter dated April 8, 2022, and DEP comments with the issuance of the DEP File Number. In addition, you will find enclosed herewith, the revised Definitive Plans and revised Stormwater Management Report. Written comments from the residents of both communities will be issued under separate cover. For your convenience, we've presented the GEI and DEP comments in *"italics"* and the LDC responses in a conventional font. Please find the following:

Graves Engineering, Inc. Peer Review Letter

Subdivision Rules & Regulations

- 1. The proposed conditions sheets need to reference specific construction details by detail letter designation and applicable detail sheet number. (§4.2.3.f & §4.2.3.h)*
A waiver has been requested and granted to this requirement.
- 2. The plans need to include a construction detail for the light pole itself, or a note stating that street lights in Douglas will meet all Douglas requirements. (§4.2.3.h)*
A detail has been added to Sheet C-405.
- 3. Soil tests and their results are required at 100-foot intervals along the centerline of proposed roadways. (§4.2.3.i.13)*
A waiver has been requested and granted to this requirement.
- 4. Rational Method pipe sizing calculations need to be provided. (§4.2.3.i.13)*
Rational Method stormwater calculations have been prepared and submitted herewith.
- 5. The road profiles need elevations every 50 feet, and every 25 feet at vertical curves. (§4.2.4.c & §4.2.4.f)*
The plans have been revised accordingly.

6. *On Sheet C-302, the road profile needs to include the grade between stations 10+00 and 14+65. Additionally, on Sheets C-303 and C-504, the road profile needs road grades. (§4.2.4.i)*
The plans have been revised accordingly.

7. *GEI understands a waiver was requested to allow for a 50-foot right-of-way width along Road "D". Additionally, the waiver request notes that while not specified in the Rules and Regulations, a 24-foot pavement width is typical in Douglas and was requested to allow a 22-foot pavement width along Road "B", Road "C", and Road "D". GEI has no issue with these right-of-way and pavement widths and understands the Planning Board will address waiver requests. (§5.1.2)*

A waiver has been requested and granted to this requirement to the Sutton 26' wide pavement requirement. The Douglas Planning Board voted to allow 24' pavement widths to Road A&D and 22' pavement widths to Road B&C. The applicant respectfully withdrew the waiver request of the Douglas 60' layout width to allow ample room for street plantings without encroaching onto the lots.

8. *GEI understands a waiver is requested to allow grades greater than 2.0% within 150 feet of an intersection or cul-de-sac. GEI understands that the Planning Board will address waiver requests. (§5.1.3.e)*

A waiver has been requested and granted to this requirement.

9. *Sheet C-502 shows the road grades if the waiver for intersection grading is not granted, and the grading cannot be more than 2.0% at intersection approaches. However, the grade along Road "B" approaching the intersection of Road "C" is greater than 2.0% and does not meet the requirements of Rules and Regulations. (§5.1.3.e)*

A waiver has been requested and granted to this requirement, therefore, Sheet C-502 has been removed from the plan set.

10. *The Typical Section - Subdivision Roadways construction details need to indicate that the gravel base will be placed the width of the roadway base course plus two feet on both shoulders. (§6.1.3)*

The Typical Section Details have been revised on Sheet C-404.

11. *On Sheet C-404, the Bituminous Concrete Pavement construction detail lists material thicknesses for trucking areas as well as passenger car/parking areas; this construction detail appears to be for a commercial development and needs to be revised. It would be advantageous to have one road section for the entire subdivision. Sutton and Douglas have different road section requirements. GEI recommends that consideration be given to a road section consisting of twelve inches of gravel, 2-1/2 inches of binder asphalt and 1-1/2 inches of top course asphalt as required by Douglas. (§6.1.5)*

The Detail has been revised on Sheet C-404 and the Sutton planning Board granted a waiver to allow greater pavement thickness to be consistent with the Douglas pavement thickness requirements.

12. *The plans need to include locations and construction details for the bituminous concrete berms and curb inlets. The plans need to indicate that the berms will be Cape Cod berms. The plans propose Type 3 (nearly vertical) bituminous curb, which can be prone to displacement by snowplows. Also, granite curb is required at street intersections. (§6.2)*

The plans have been revised accordingly depicting granite curb inlets at all catch basins and

on the roundings at the entrance of Road A at Duval Road. Callouts of curb types have been added to the plans with corresponding details added to Sheets C-402 C-404.

13. *GEI understands that a waiver was requested to allow sidewalks on only one side of the road. GEI understands that the Planning Board will address waiver requests. (§6.4)*

A waiver has been requested and granted to this requirement.

14. *GEI understands a waiver was requested to eliminate street trees. GEI doesn't have an issue with preserving existing trees. Any areas along the rights-of-way cleared of trees should have street trees planted. (§6.5)*

A waiver has been requested and granted to this requirement.

15. *Traffic control and street name signage is required throughout the site. Sheets C-301 through C-307 label an R1-1 sign at intersections. A construction detail depicting an R1-1 sign should be provided on the plans. (§6.7.2)*

The plans have been revised to depict street name signage at the intersections and a construction detail has been added to Sheet C-405.

16. *The plans should identify the location of central mailbox units. (§6.7.3)*

A centralized community mailbox has been added to the plans on Road A at the southerly intersection of Road B which will be illuminated by the proposed streetlight at the intersection. The location was approved by the acting Douglas Postmaster.

Zoning Bylaw

17. *Lot 23 is listed as a reduced frontage lot. Per Section 4.3.1 of the Zoning Bylaw, "the area of said lots is at two times (2x) the required area for RA zoned parcels ... not including the "Access Strip". "Access strip" in this case shall mean any portion of the lot between the street and the point where lot width equals one hundred (100) feet or more". Following this definition, Lot 23 has an area of approximately 150,000 SF not including the access strip and does not meet the requirement of having an area two times the zoning requirement of 90,000 SF or 180,000 SF. Likewise, Lot 22 has an insufficient area of approximately 175,000 SF. (§4.3.1)*

The plans have been revised accordingly.

Hydrology Calculations & Stormwater Management Review

18. *GEI reviewed the hydrology computations; we have no issues with the modeling of the subcatchments, reaches and basins except as noted in the following comment.*

Acknowledged

19. *Subcatchment 702P modeled 24,764 square feet of impervious for the "paved roads w/curbs and sewers" but GEI estimated the road pavement area to be approximately 44,500 square feet. Subcatchment 702P is tributary to Pond 702P; the tributary road area consists of the entirety of Road "B", Road "A" between stations 5+20+/- and 10+80+/- and half of Road "A" between stations 10+80+/- and 11+80+/-.*

The calculations have been revised accordingly.

20. *The Stormwater Report needs to include the recharge and water quality volume calculations for Standards 3 and 4.*

The calculations have been revised accordingly.

21. *The proposed earth cuts at the infiltration basins are not unreasonable, nevertheless soil testing needs to be performed at the basins to demonstrate a two-foot offset to groundwater.*

Test pits were excavated and witnessed by GEI and LDC during the period of April 27th through April 29th. The Mass DEP Soil Log Data Sheets are included in the revised Stormwater Management Report.

General Engineering Comments

22. *GEI reviewed the information in the Hydrogeologic Assessment and has no issue with the information presented nor with the conclusions of the assessment. The assessment evaluated hydrogeologic conditions on an area-wide level.*

Acknowledged

23. *On Sheet C-303, information for the vertical curve at station 25+00+/- needs to be added to the plans.*

The plan has been revised accordingly.

24. *The plans need to include pipe diameter, slope, and length for the pipe between DMH-4031 and FE-4030.*

The plan has been revised accordingly.

25. *On Sheet C-307, at DMH-5032 the inlet and outlet elevations need to be swapped.*

The plan has been revised accordingly.

26. *On Sheet C-402, Note 1 in the Dry Well construction detail has blank lines where the diameter and depth should be. The detail needs to be revised to include this information.*

The detail was mistakenly included in the plan set and has been removed.

General Comments

27. *GEI reviewed the information in the Hydrogeologic Assessment and has no issue with the information presented nor with the conclusions of the assessment. The assessment evaluated hydrogeologic conditions on an area-wide level.*

Acknowledged

28. *On Sheet C-303, information for the vertical curve at station 25+00+/- needs to be added to the plans.*

The plan has been revised accordingly.

29. *The plans need to include pipe diameter, slope, and length for the pipe between DMH-4031 and FE-4030.*

The plans have been revised accordingly.

30. *On Sheet C-307, at DMH-5032 the inlet and outlet elevations need to be swapped.*

The plan has been revised accordingly.

31. *On Sheet C-402, Note 1 in the Dry Well construction detail has blank lines where the diameter and depth should be. The detail needs to be revised to include this information.*

The plan has been revised accordingly.

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DEP Comments

1. Project must also be filed in Sutton.

No portion of the project is within the jurisdiction of the town of Sutton Conservation Commission; therefore, no filing is required in Sutton.

2. Based on the pre- and post- peak attenuation chart, there appears to be an increase during the 100- year storm. Applicant should provide additional data that demonstrates no effect to offsite properties.

While there was a less than 5% increase at the ditch, the area contains a breach point where at some point stormwater would surcharge at the Duval Road culvert causing some of the stormwater to eventually flow to the Mumford River. The area upgradient of the culvert essentially functions as a large natural detention basin with the culvert regulating the flow.

3. The soils reported in the soil logs appear to be rapidly infiltrating and based on the appearance of soils with rapid infiltration rates, 1" rate should be used to demonstrate that Standard 3 is met. Drawdown calculations should be provided for all infiltration points.

Hydrographs demonstrate that the 72-hour drawdown period is met.

4. Test pits are required at the location of any infiltration BMP, one sample for every 5,000sf of basin, with a minimum of three samples per basin, to verify seasonal high groundwater and soil type. While the soil logs have been provided, a test pit does not appear to be situated at each infiltrating BMP. Please provide addition information for where BMPs are situated and confirm the depth is at least 2 ft to seasonal high groundwater and/or bedrock. A detail on the separation from SHGW should also be provided. See V2, Ch2, p88 of the MA Stormwater Handbook.

Test pits were excavated and witnessed by GEI and LDC, during the period of April 27th through April 29th.

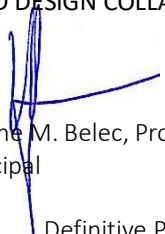
5. The Stormwater Standards require a minimum distance for an infiltration BMP to be 50 ft from any jurisdictional water/wetland. See V1 Ch1 Pg.8 of the MA Stormwater Handbook. Redesign may be required, please review BSN-702 and wetland flag series A23-A30 and BSN-403.

The criteria has been met for all the proposed stormwater basins.

We trust that you will find the enclosed information acceptable, and we thank you in advance for your review of the information. The final revised plans and supporting documentation will provided under separate cover. Please feel free to contact me should you have any questions or wish to discuss.

Sincerely,

LAND DESIGN COLLABORATIVE



Wayne M. Belec, Project Manager
Principal

Encl. Definitive Plan | Sutton Douglas Development, revised May 27, 2022
Stormwater Management Report – Addendum 1 | May 2022

cc: Mr. Jeffrey M. Walsh, P.E., Principal, Graves Engineering Inc.
Mr. Timothy Flynn, Flynn Build & Develop

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